

BECAUSE PRECISION MATTERS THERE IS TRUTEMP™ TECHNOLOGY

The NeuroBlate® System is used in over 60 hospitals and in more than 1,900 procedures.

BUILT TO DELIVER ACCURATE THERMOGRAPHY WITH ENHANCED VISUALIZATION

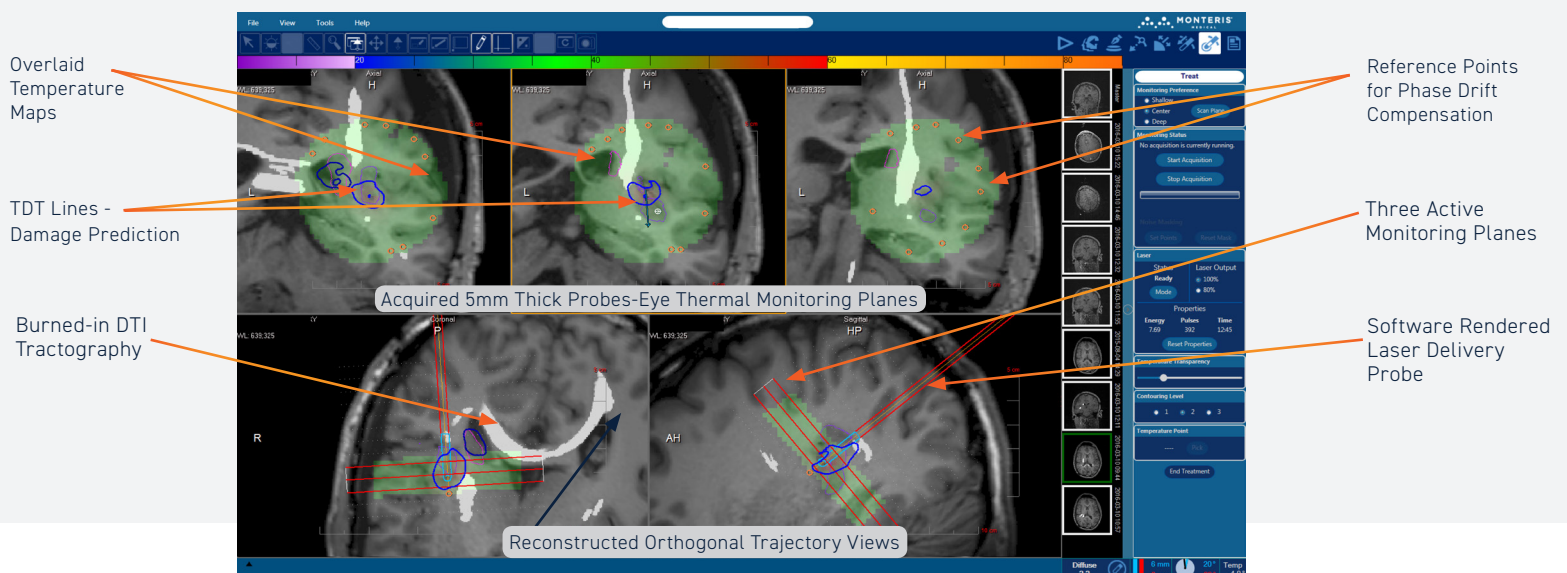
During a LITT (Laser Interstitial Thermal Therapy) procedure, the visual representation of the MR thermometry data is critical to the user's ability to perform a neurosurgical ablation in a safe and effective manner. The NeuroBlate System is designed to provide deeper penetration of laser energy with a measured and steady rate of heating for a controlled ablation.

Controlled Heating of Targeted Ablation Zone

- 1064 nm wavelength allows for deeper penetration of energy and a slower rate of tissue heating. This controlled heating approach means that over-heating targeted tissue maybe prevented.
- The NeuroBlate System cools the laser probe with pressurized Carbon Dioxide (CO₂) that is continuously adjusted by NeuroBlate Fusion Software™ to maintain probe tip temperature. This helps to control the tissue ablation.
- With pulsed laser firing, the NeuroBlate System allows probe cooling between firing intervals, which supports controlled ablation.
- The NeuroBlate System allows the user to reduce the power levels to one of three available settings to further control ablation speed.

NeuroBlate Delivers Enhanced 3D Visualization

- The NeuroBlate Fusion Software™ allows for the user to accurately fuse the preoperative Diffusion Tensor Imaging (DTI) data with the day-of-treatment images. This ensures the anatomical accuracy of the combined images during the procedure. During an ablation, the user can view a combination of the fused images and the Thermal Dose Threshold (TDT) lines to control ablations.
- When using MR thermometry to visualize an ablation, it is necessary to optimize voxel* size, MR acquisition time and the number of planes presented. Visualizing the ablation in three dimensions and maintaining an 8-second MR acquisition time is valuable information to the user for a targeted ablation.
- The NeuroBlate System was designed with a voxel size of 2mm x 2mm x 5mm. This representation of the ablation zone allows for appropriate clinical decisions during the procedure while still allowing a three dimensional representation of the ablation and a MR acquisition time of 8 seconds.
- NeuroBlate Fusion Software™ feature can be utilized to merge post-operative MRI data to intra-operative data to allow for confirmation of thermal estimate using post-operative, post-contrast enhanced imaging.

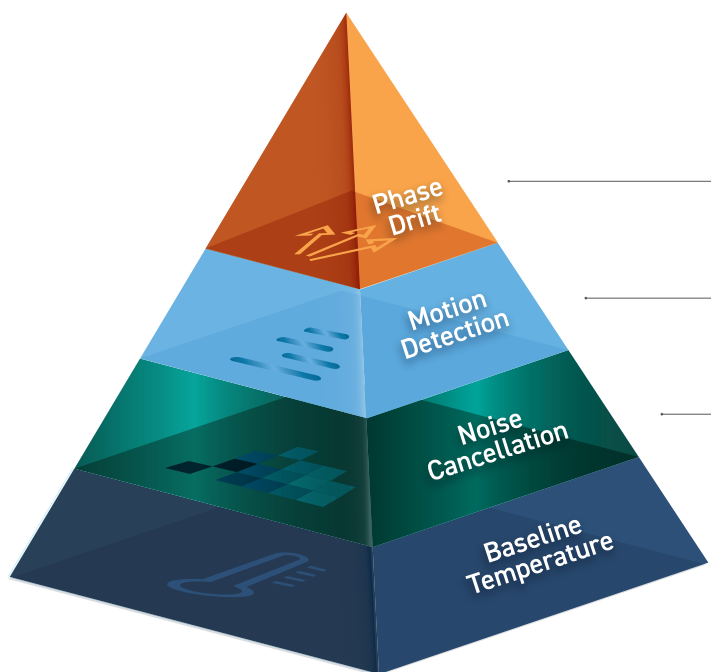


*"Voxel" is a three dimensional pixel obtained by a LITT system from the MR thermometry which, when combined, creates an enhanced visualization of the ablation zone.

NeuroBlate® and Precision Thermography

- Ablation area monitoring with the NeuroBlate System occurs in three orthogonal planes, as well as perpendicular slice planes above and below the center of the ablation zone. This eliminates the uncertainty associated with a "blind" ablation (i.e., no defined ablation zone).
- The rate of tissue heating with NeuroBlate is between 0.125 - 0.25 degrees Celsius per second (which correlates to 1 - 2 degrees Celsius rise per MRI scan every 8 seconds) at the area next to the probe tip. This controlled approach significantly limits the risk of unintended thermal spread.
- NeuroBlate Fusion Software™ features exclusive TruTemp™ Technology, mitigating factors that negatively influence MRI thermometry, providing confidence in the accuracy of the ablation zone and added safety assurance.

PRECISION & CONFIDENCE DELIVERED with TRUTEMP™ TECHNOLOGY



TRUTEMP TECHNOLOGY

Proton resonance phase drift, which is inherent with all MRI scanners and can account for a several degree temperature variance over short time intervals, is mapped and corrected.

The NeuroBlate System detects patient motion and significant RF noise events, and will automatically shut off the laser when appropriate for added safety.

NeuroBlate removes pixels which exhibit unstable MRI signal and can cause inaccurate thermography.

Actual baseline body temperature is used as an input, rather than assuming 37° C. This assures that the ablation temperature is accurate for cell death.

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